5 FAH-5 H-100 INFORMATION TECHNOLOGY SYSTEMS

5 FAH-5 H-110 PROCEDURES FOR DEVELOPING AND MANAGING DEPARTMENT OF STATE PROJECTS

(CT:ITS-2;   07-13-2007)
(Office of Origin: IRM/BPC/RG)

5 FAH-5 H-111 INTRODUCTION

5 FAM-5 H-111.1 Purpose

(CT:ITS-2;   07-13-2007)

a. The purpose of this handbook is to:

(1)   Implement policy in 5 FAM 611, Developing and Managing Information Technology (IT) Systems (see 5 FAM 600);

(2)   Support policy described in 5 FAM 620, Information Technology (IT) Project Management; and

(3)   Address the requirements for project development, integration, modification, and maintenance of the Department's IT systems, products and services.

b. Department personnel involved in project development must follow the procedures outlined in this handbook. Projects covered by this guidance include, but are not limited to:

(1)   Development of new IT services, systems and applications, feature and maintenance enhancements; and

(2)   Integration and modification efforts of both commercial off-the-shelf

(COTS) and government off-the-shelf (GOTS) products.

5 FAH-5 H-111.2 Objective

(CT:ITS-2; 07-13-2007)

a. The objective of this handbook is to outline the minimum requirements
and procedures for:

(1)   Project Management, as prescribed in 5 FAM 620;

(2)   Data Management, as prescribed in 5 FAM 630;

(3)   Project Quality Management, as prescribed in 5 FAM 640;

(4)   Configuration Management, as prescribed in 5 FAM 650;

(5)   Benefit Cost Analysis (BCA), as prescribed in 5 FAM 660;

(6)   IT Performance Measures, as prescribed in 5 FAM 670; and

(7)   Earned Value Management, as prescribed in 5 FAM 680.

b. Managers must meet the objectives for managing State projects (MSP),
as generally defined in 5 FAM 610. In addition, project managers must:

(1)   Plan and manage records effectively;

(2)   Prepare for program reviews; and

(3)   Build an historical archive that assists in accurately estimating costs
on future projects.

5 FAH-5 H-111.3 Authorities

(CT:ITS-2; 07-13-2007)

The authorities establishing the procedures in this handbook are covered in
5 FAM 612.

5 FAH-5 H-111.4 General

(CT:ITS-2; 07-13-2007)

a. Department projects must be defined by a project plan prior to beginning
any work on the project, and project plans must include the name of the

project manager (see 5 FAM 615, The Project Plan, and 5 FAH-5 H-213).

b. The Office of Management and Budget (OMB) mandates strict evaluation of major and non-major projects through the Electronic Capital Planning and Investment Control Process (e-CPIC) tool, and major projects must be justified based on certain criteria (see the e-Gov Web site).

c. Project managers must:

(1) Adhere to policy established in 5 FAM 620 for managing State projects (MSP), the implementation procedures in this handbook for project management techniques, and the technical disciplines associated with managing projects throughout the life cycle;

(2) Service contracts (including, but not limited to, the development of software) and develop and supply to the contracting officer a performance work statement (PWS) that defines what objectives are to be achieved rather than dictates how the contractor will achieve those objectives. Incentives should be included to better ensure that the objectives will be achieved with high quality and in a timely fashion. Appropriate deliverables, standards and control gates must also be included in the PWS. Project managers must also monitor contractor performance to ensure that the objectives are achieved as stated in the contract, and include contractor-earned incentives in payments to the contractor when those incentives are included in the contract (see 5 FAM 915.4).

d. Pilots for Department projects must undergo pre-approval by the Office of Information Assurance (IRM/IA) before their operational implementation (see 5 FAM 619).

e. To ensure consistency with the Department's enterprise data model (EDM), all major application and general support system development projects must have data management support coordinated with the Applications Integration Division – Data Management Section (IRM/OPS/SIO/API/DM) (see 5 FAM 637.1).

f. A benefit cost analysis (BCA) is required for all projects whose cost exceeds $100K (see 5 FAM 662 and 5 FAH-5 H-610).

g. A simplified BCA is required for all projects with life-cycle costs under $10M (see 5 FAM 662 and 5 FAH-5 H-610).

h. Project managers must incorporate records management and archival functions into the design, development, and implementation of information systems (see OMB Circular A-130, paragraph 8a(1)(k)).

5 FAH-5 H-111.5 Definitions

(CT:ITS-2;   07-13-2007)

Accreditation: See 5 FAH-11 H-014.

Attribute: An item of data, a fact, or a single piece of information about an entity that quantifies, identifies, classifies, or describes that entity.

Benefit cost analysis (BCA): The process of weighing the total expected costs against the total expected benefits of one or more actions to choose the best or most profitable option.

Commercial off-the-shelf (COTS) software: Software that has been developed at private expense and later sold to the U.S. Government. The license for the software is owned by the software vendor. The U.S. Government generally pays a licensing fee to the vendor for use of this software, as well as a periodic software maintenance fee to have the vendor fix software bugs and update the software to keep its technology with what is then in the market, including U.S. Government requirements (such as standardization, etc.) rather than solely at the specific request of the agency. The Office of Management and Budget (OMB) has stated that agencies are to prefer COTS software over GOTS and other software since (among other things) the responsibility for maintenance and continued development is on the vendor rather then the U.S. Government. COTS are also preferred since continuing maintenance and development are done at fixed (usually monthly) prices, at reduced risk to the U.S. Government.

Data element: A named identifier of each of the entities and their attributes represented in a database.

Data element standardization: The process of documenting, reviewing, and approving unique names, definitions, characteristics, and representations of data elements according to established procedures and conventions.

Enterprise data model (EDM): See 5 FAM 637.1.

Government off-the-shelf software (GOTS):   Software that is developed at U.S. Government expense. The license for the software is owned by the U.S. Government rather than the software vendor. While the U.S. Government does not pay license fees for this type of software, it does pay vendors for each individual bug fix or software enhancement, generally on a cost-reimbursement or time-and-materials basis. It is the U.S. Government's responsibility to discover bugs and determine its requirements for enhancements, often without sensitivity towards

capabilities then available in the marketplace. The U.S. Government must then pay the vendor for each fix or enhancement. Generally, these costs exceed the costs encountered when fulfilling the same requirements using COTS software. The risk to the U.S. Government is also greater with GOTS software than COTS software, since the U.S. Government also has a greater software testing responsibility with GOTS than with COTS. For these and other reasons, COTS software is preferred over GOTS.

Performance work statement (PWS): A statement of work (SOW) tells the contractor what the U.S. Government wants done and how the U.S. Government wants it done. It dictates both the problem and the solution the contractor is to provide. A PWS is a performance-based SOW that tells the contractor what to do, but not how to do it. A PWS allows the contractor to provide the contractor's own solution to a problem stated in the PWS rather than be forced to provide only the government-dictated solution to that problem. A PWS should include incentives that are tied to solving the stated problems in a high quality way (as defined in the PWS) and in a timely fashion. PWSs are preferred to regular SOWs.

Project risk management: See 5 FAM 613.

Records management: The planning, controlling, directing, organizing, training, promoting, and other managerial activities involved in records creation, maintenance and use, and disposition in order to achieve adequate and proper documentation of the policies and transactions of the Federal Government and effective and economical management of agency operations (44 U.S.C. 2901).

Work breakdown structure (WBS): An actual plan and account of all the elements involved in building a project from the beginning to the end by defining, organizing, scheduling, budgeting, and controlling each task associated with the project.

5 FAH-5 H-112 ROLES AND RESPONSIBILITIES

(CT:ITS-2; 07-13-2007)

a. Well-defined roles and responsibilities ensure a project's success. The roles and responsibilities listed in the following sub-paragraphs may require one person to perform multiple roles or several members of the project team may work together to fulfill one role. Duties may vary based on the project phase, nature of the project, as well as scope and risk changes that may be identified throughout the project life cycle.

b. Although the sponsor or user and/or customer is identified and executive management must approve and commit funds for the project, the project manager is the focal point through the project's life cycle for managing project resources and tasks to meet project objectives, satisfy user requirements, and manage and control well-defined cost and scheduled allowances.

c. Most of the roles and responsibilities associated with new or enhanced projects are predetermined based on organizational structure and business need. The requirements, rules and responsibilities will vary from project to project. The project manager is responsible for ensuring the appropriate roles and responsibilities associated with the project are documented, available, and acquire the skill sets required to complete the project. Resource requirements and their roles and responsibilities must be communicated to the sponsor and stakeholders. The resources roles and responsibilities, rules, and requirements will vary from project to project.

d. Other roles and responsibilities for a U.S. Government project office, functional managers, contractors, source evaluation board, and other personnel are identified during the acquisition phase when contractors are required (see 5 FAH-5 H-217.2, Acquisition Period).

5 FAH-5 H-113 REVIEW BOARDS

(CT:ITS-2;   07-13-2007)

a. Review boards collectively ensure accountability for IT projects through formal reviews of defined performance measures:

   (1)   E-Gov Program Board is an advisory board to the Under Secretary for Management comprised of Assistant Secretaries representing Department-wide interests (see 5 FAM 115.3);

   (2)   E-Gov Advisory Group (see 5 FAM 115.3-1); and

   (3)   E-Gov PM/E-Gov Working Group provides business and technical assistance.

b. E-Gov also supplies project managers and sponsors with project data and documentation generated from management processes that are used to justify, plan and deliver the IT initiative on schedule, within cost, and to specification.

5 FAH-5 H-114 PROJECT CERTIFICATION AND ACCREDITATION REQUIREMENTS

(CT:ITS-2;   07-13-2007)

a. Department projects for developing new systems or upgrading existing ones must ensure that these systems undergo certification and accreditation (C&A) in accordance with Department policy (see 5 FAM 1060, Information Assurance Management).

b. C&A must be obtained prior to system operational deployment.

c. During project development, proper security measures must be in place to:

   (1) Determine applicable requirements, standards, procedures, and guidelines;

   (2) Ensure the system has required security functions and features; and

   (3) Conduct and document security reviews and walkthroughs, ensuring compliance.

5 FAH-5 H-115 ACQUISITION

(CT:ITS-2;   07-13-2007)

a. During the acquisition phase, project managers must:

   (1) Ensure that contracting activities are reviewed and analyzed; and

   (2) Evaluate incoming procurement requests for selections based on results-oriented, service-based contracts that specifically respond to the U.S. Government's Statement of Work (SOW) and define the requirements in terms of measurable deliverables (see 5 FAM 900 for overall acquisition policies).

b. The final acquisition plan must prove the new project efforts are developed in accordance with the Department's acquisition reform initiative (see 5 FAH-5 Exhibit H-217.2(1)).

5 FAH-5 H-116 RISK MANAGEMENT

(CT:ITS-2;   07-13-2007)

a. Risk management is the method of identifying, analyzing, and responding to risk(s) throughout the life of a project in the best interests of meeting project objectives. Risk management practices are extremely helpful to the project team in determining potential problems that might occur on the project and how they might impede project success. The elements of risk management (i.e., risk analysis and risk assessment and development of a risk plan) will focus the project team on planning for and measuring potential risks to improve the success rate by:

(1)   Identifying problems and solutions early;

(2)   Documenting and prioritizing risks based on their probability and impact occurrence;

(3)   Avoiding surprises and failures; and

(4)   Minimizing scheduling slips through effective monitoring and controls of risks, and implementing a risk plan and evaluating the effectiveness of risk strategies through the project life cycle.

b. Effective planning should provide a general understanding of how to manage technical costs and schedule risks.

c. Project managers must factor into the WBS the necessary steps to mitigate risks that have been identified, and incorporate them into the project plan. Managers should also seek ways to avoid or mitigate those same risks in other areas of the project.

d. Project Management, 5 FAH-5 H-200, provides all the elements involved in effective project requirement management. The chapter also includes information on how to minimize risk and improve planning through the application of MSP principles.

5 FAH-5 H-117 THROUGH H-119 UNASSIGNED